**15 NCAC 2B .0262-0267**
**COMMENTS & QUESTIONS**

**These comments are from a reading of the published regulation JORDAN RESERVOIR WATER SUPPLY NUTRIENT RULES, 15A NCAC 02B. I am impressed with the obvious research and development which must have precluded the rendering of this regulation/draft. It is as comprehensive and detailed as any water quality regulation of which I am aware. I trust that there will be sufficient funding and time to include worthy recommendations made for your consideration. My highest respect and admiration for the work. I have read every document referenced or attached to the above rules and spent the day processing and making this letter.**

**My one major reservation is that information provided to worthy members the boards sitting for the duration of this project may be given material as factual when the margins of error in statistical information may not warrant such certitude. Agendas over fact grant room for bad decisions. A caveat should be explained to each new member for that purpose, though the appointment format and agencies named will provide competent people, I am sure. The external forcing functions of chlorophyll a and relation to algae blooms must be a prime example of that error (Report memo by Tetra Tech, July 26, 2004, Jordan Lake Nutrient Response Model Uncertainty) and should be noted to avoid panic driven buzz words like algae bloom associated with chlorophyl a as sole measurement of success or failure of the program.**

**Further, I see that poor little Chatham County has been the recipient of everyone else's waste and, therefore, the one responsible for cleaning up the Haw River. Albeit, poultry production in Chatham is responsible for major non-point source run off of N and P. But the accumulation of river pollutants happens to peak in Pittsboro, placing limits on future development and growth already pressuring the area and providing needed jobs and income.**

**I agree with the Triangle "J" Stakeholder Project opinions of planning and drafting the regulation. I also emphasize opinions expressed on trading, WQ testing and modeling based on that testing, adaptive management and, especially, TMDL goals based on modeling with statistical error described in the Tetra Tech report dated 7/26/2004.**

**15A NCAC 02B REGULATION - .0262-.0272**

**.0262 -**

**Section 6:** **The counties and local governments must have an extraordinary means to include unincorporated areas in the plan, other than county regulation. The towns and living areas of Bynum, Silk Hope, Eli Whitney, Swepsonville, Saxapahaw, Wilsonville, although mentioned in other parts of the report, would need attention to urban strategies and practices for nutrient reduction normally unenforced at the county level. County DEH's are not funded for such activity.**

**.0263 - Nutrient Management**

**Section 3, (d) and 4:** **In general, Section 1 defines the goal which applies to "anyone" applying nutrients to watershed lands, a good goal. It further ties the practices required in planning and record keeping to land based operations, nurseries, turf farms, gold courses, etc. However, the execution of landscape operations, more and more on parcels greater than five acres, would require landscape contractors to file a plan, rather than the owner and developer of the property. This requirement places landscape contractors in the untenable position of having to be responsible for plans and specifications created by a landscape architect and approved by the owner which may, potentially, be unapproved by WQ, DE, DENR. This position is neither desirable nor fair. Landscape contractors must already perform their jobs governed by two standards, one of performance standards and the other of final result standards. They must do what the specifications say and also guarantee the results even if they know better than the specifications. This final level of potential non-compliance will embarrass and punish some unsuspecting contractor in the future.**

**Placing the burden of regulation on the contractor is vastly unfair and unenforceable. Alternately, the state government, DENR, DEM and WQ Section should publish to all concerned that all contractors handling fertilizer, including general, grading, septic tank, etc., must plan to obey**

**this law or go out of business. The last option is the logical outcome for contractors because of the volume of work necessary to conduct business, make a profit and stay in business.**

**Needs to be rewritten to place burden on land owners, developers and consultants who require performance standards of contractors.**

**Section 5** **Perfectly reasonable certification model. However, references to NCCES publications do not contain adequate information on biologically sound fertilizing practices which are known to reduce nutrient run off. Since the state university staff and/or NCCES employee has not published the paper, publication or booklet, it does not officially exist. This flaw in information management and approval leaves North Carolina at a deficit of information and expertise from which it will not recover unless broader sources of knowledge are ACKNOWLEDGED.**

**.0263 - Nutrient Management**

**The whole section is worded for regulation, without room for mitigation or credits. If a nursery, turf farm, or greenhouse were to practice a pollution saving program and surpass goals and expectations, who would benefit this improvement? These operators are every bit as conservation conscious as farmers and better informed of industry improvements.**

**Section 6** **Nutrient Management Plans: Certification is simply described, affordable, according to the fiscal impact part of the report. In paragraph 6, (a), (ii), the requirements are established by NCCES publication, not an industry source. If none were available or offered, I reserve further comment. In paragraph (iii), the SNA provided guidelines for BMP's. Excellent choice.**

**Paragraph 6, (b) is flawed in the same fashion. S&WC does not have expertise in turfgrass, nursery and greenhouse practices and conservation techniques. Hopefully, a good consultant will be appointed to the job of determining goals and regulations for these trades.**

**.0264 - Agriculture**

**An extremely well defined section with clear authority and organization for boards. It has a flexibility for adjusted goals and practices, which will be needed for program development. Agriculture has escaped close scrutiny over the decades of water quality regulation. However, the burdens placed on the marginal business of farming demands that oversight. With reasonable institution of practices and goals, farmers will contribute what is necessary for abatement of pollution.**

**I will add one comment which can apply to sections regulating urban and suburban goals and regulations. It will seem sarcastic and flippant, but it has merit. Pets are unregulated and, yet, contribute an immense load of nutrients to a watershed. In the 1970's, I was instructed that twelve chickens would produce three tons of manure a year. My chickens weighed about seven pounds each, the equivalent of an eighty-four pound dog, or two forty-two pound dogs. On rough calculations (SWAG), a city the size of Chapel Hill has approximately eight thousand residences with such pets, let us say one per household in that group. So, eight thousand dogs, forty two pounds each, producing one and one-half tons per year, will create twelve thousand tons of unregulated manure for an urban basin area. This does not account for disease factors in the manure. With a low three percent N and unknown P, that places 720,000 pounds of N into a run off environment which would be an enforceable event in any other section. These calculations are debatable, but not far from the truth and deserve serious consideration at some point. "Muffy" has a run off problem, as does the Cheshire cat.**

**I know that, if I were responsible for such run off under this law, I would be in mitigation court or in jail. The 3500 chicken under section 4, ©, only produce 525,000 pounds of N per year, and probably less since they are smaller than mine were.**

**Thus closes the SWAG section of comments.**

**.0265 - Stormwater Management for New Development**

**Another excellently worded and referenced section.**

**Stabilization of stormwater devices may be improved by the use of compost and native plants and grasses for reduction of pollution and germination or establishment time.**

**.0266 - Stormwater**

**Section 3, (a), (iv)** **Governments maybe granted credits for employing biologically sound practices of composting waste, using compost and other pollution reducing landscape practices. The conventional practices add to pollution many times more than biological ones. Governments control production of compost and specifications for installation and maintenance of thousands of acres of landscape. This subsection, alone, could impact run off significantly and reduced nutrients in our watershed.**

**Section 3, ©** **More important than may be realized, homeowner application of fertilizer contributes more than may be forecast in the models. This eventuality can not be regulated by imposing restrictions on landscape applicators, but by an excellent homeowner education program and some form of reward for using compost and other biologically sound practices.**

**.0267 - Existing Riparian Buffers**

**This section appears to be the best well conceived and written. The definitions and clauses are clear and well defined.**

**I would urge the ability of local governments to increase setbacks and regulations, within reason, for the purpose of acquiring credits for better management of watersheds.**

**This section is land based. Owners and project managers of specific parcels must apply for exemptions and variances. .0263, sections 3 and 4 should be so focused, instead of placing the burden on an ersatz user of the parcel.**

**I would also urge that the section on mitigation fees (.0272) include reference to the American Society of Consulting Arborists for penalty determination for intrusion enforcement.**

**.0268 - Mitigation of Riparian Buffers**

**Extremely well conceived and written.**

**Section 6** **I would like to see a reference to ASCA, see .0272, for determination of**

**assessments or reparations for vascular flora in the mitigation zone. Other professional societies are cited. ASCA should be also as the expert in the industry from whom insurance claims are determined.**

**Section 7, © Glad to see reference to and encouragement of land conservation.**

**Section 7, (d) Glad to see reference to USPAP and Surveying standards**

**.0269 - Options for Offsetting Nutrient Loads**

**General comments: While this section is the most promising for low load governments, it does not contain any guidelines or standards, other than case by case approval. The technology of composting is a multi-generator, low impact, well managed strategy for reducing waste, reducing nutrient load and keeping waste from landfills and low technology applications. Composting us capable to managing agricultural wastes, including animal, providing low a impact solution to the goals stated, combining agricultural and municipal wastes (carbon sources), and rendering a stable, low nutrient product, easily stored, for distribution to a market engulfed in polluting products.**

**If this technology were recognized in the regulation, and allowed animal producers to use it to create an agricultural credit, many problems with the agricultural, non-point source run off would be solved at low cost to producers.**

**To further develop this argument, the landscape industry is responsible for applying chemical fertilizer, recognized as producing nutrient run off in urban and suburban areas, as much as sixty-seven percent (67%) of nutrients applied. Parcels managed with biologically sound practices, including the use of compost, have research which demonstrates the reduction of nutrient pollution.**

**That there may be no supporting research form NCSU or NCCES is only because that condition is a self fulfilling prophecy. Research exists outside of these sources which clearly demonstrates the claimed**

**phenomena, but which has not been published by one of the North Carolina principles. Therefore, it must not exist. Please open the avenues for research to include other universities and universities in other countries doing valid research on the problems found in North Carolina. They will obviate solutions not offered frequently within these boundaries.**

**.0270 - Wastewater Discharge Requirements**

**My direct experience in WWTP's, though extensive, is dated by more than twenty years. I am only aware fo alternative solutions to conventional methods and can offer no comments, within reason, on this section.**

**.0271 - Stormwater Requirements for Federal and State Entities**

**Appears to be well conceived and written. No expertise beyond application of Sedimentation and Erosion Control Act (1970's.) I may add that the use of compost will reduce nutrient run off from these parcels as well as stabilize the soil nutrient cycle to reduce future run off. A practice which should be encouraged in the mitigation strategies and options for offsetting sections.**

**.0272 - Mitigation Fees**

**I would urge that this section include reference to the American Society of Consulting Arborists (ASCA) for penalty determination for intrusion enforcement and collection. Forestry values would not reflect the completeness of values represented in ASCA practices.**

**Fiscal Analysis - B Everette Jordan Reservoir Water Supply Nutrient Strategy (http://h2o.enr.state.nc.us/nps/documents/FiscalText6-11-07-Final_002.pdf)**

**Chapter 4, RP2, Table 4:13** **Are the costs for private landowners for all parties within the region or for individual landowners of certain sized parcels?**

**Chapter 5, RP1, (d)** **I like planning tool.**

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| **Chapter 5, RP1, Table 5.3** | **Clear nutrient reduction goals for development abatement** |
| **Chapter 6, *** | **Are local regulations capable of being more strenuous than state?** |
| **Chapter 9, *** | **Kudos on addressing WWTP pollution, from 0.003 MGD up.**<br><br>**Thank you for footnote 2 on Pittsboro.** |
| **APPENDIX B, Table B6** | **I can not make sense of the Area Weighted Average of Total N/acre of 3.7 lbs or the Average Total P/acre of 1.35. Does this mean that the TMDL average nutrient loss per acre for the area concerned will be allowed this much nutrient to escape?** |

**Respectfully submitted,**
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